HenryTech

Low Pass Filter

HT-RLP-176+

Features
- high rejection
- sharp insertion loss roll off
- excellent VSWR, 1.1:1 typ.@passband
- aqueous washable

Applications
- wireless communications
- receivers / transmitters

50Ω DC to 176 MHz

Low Pass Filter Electrical Specifications

PASSBAND (MHz) (loss < 2 dB)	fco (MHz) Nom. (loss 3 dB)	STOPBAND (MHz) (loss > 20 dB)	(loss > 40 dB)	VSWR (:1) Passband Typ.	Stopband Typ.
DC-176	191	245-285	285-1000	1.1	20

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.5W max.

Permanent damage may occur if any of these limits are exceeded.

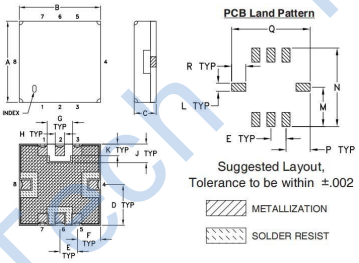
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
0.5	0.08	0.01	39.59	2	4.36
50	0.30	0.01	22.96	5	3.96
100	0.48	0.01	24.93	10	3.99
150	0.78	0.01	36.17	20	4.01
176	1.23	0.02	21.44	30	3.95
185	1.97	0.06	11.39	40	3.98
188	2.47	0.09	8.93	60	4.08
191	3.19	0.12	6.89	70	4.26
200	6.60	0.19	3.06	80	4.33
206	9.64	0.21	1.89	90	4.47
225	19.92	0.19	0.77	100	4.65
245	29.97	0.18	0.55	110	4.82
255	34.74	0.17	0.48	130	5.35
285	49.18	0.26	0.38	140	5.79
300	57.36	0.55	0.33	150	6.29
500	76.65	8.71	0.13	160	7.08
900	77.53	6.17	0.14	176	9.25
1000	74.82	4.14	0.14	180	10.17

Pin Connections

RF IN	2
RF OUT	6
GROUND	1, 3, 4, 5, 7, 8

Outline Drawing

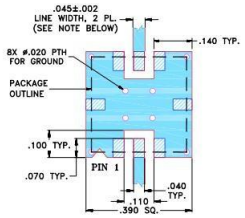


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.91	2.54	2.79	1.02	2.03

K	L	M	N	P	Q	R	wt.
.050	.040	.195	.390	.120	.390	.070	grams
1.27	1.02	4.95	9.91	3.05	9.91	1.78	0.25

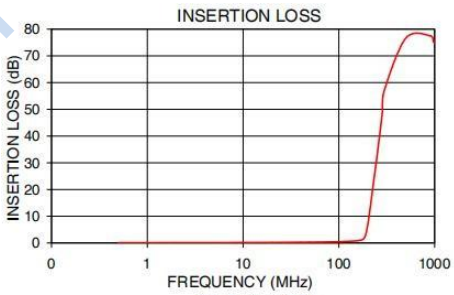
Suggested PCB Layout

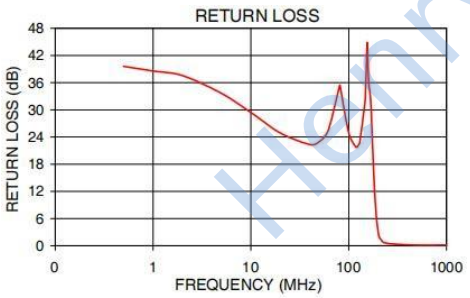


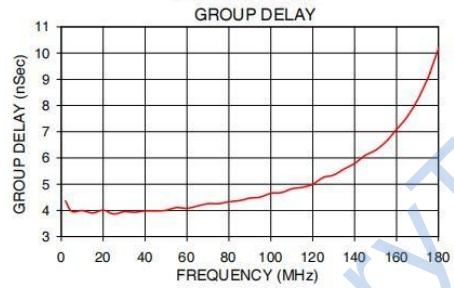
NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

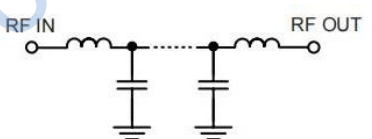
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK







Functional Schematic



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